

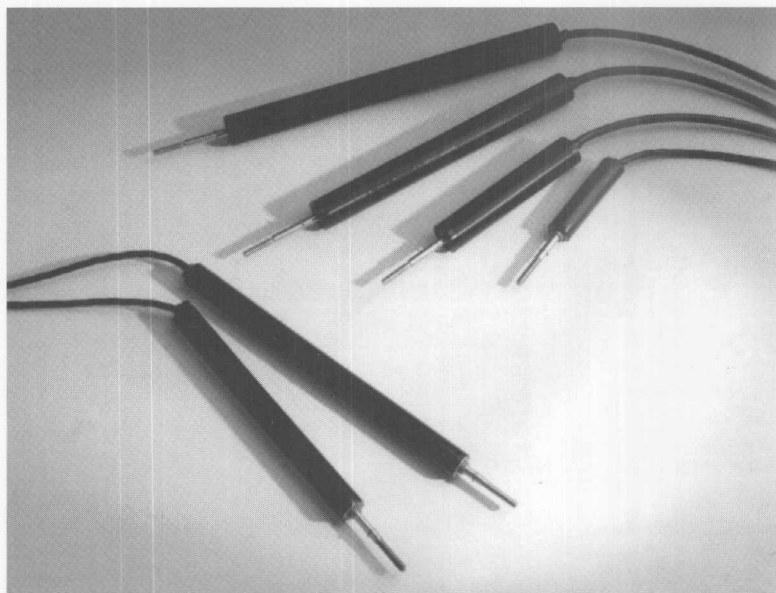
Waters

Models LT/MLT

Linear Position Transducer

The Models LT and MLT are small diameter linear position transducers rugged enough to withstand the hostile environment of the factory. Using a proprietary dual wiper, internal ball joint and the MystR® conductive plastic film, the MLT provides usable output at high vibration levels for long periods. Both use precious metal wipers to further enhance reliability. Intended for applications with moderate side loading, the LT can be provided with shaft seals for spray or hose down environments.

The MLT's 3/8 inch diameter is among the smallest available and can replace LVDT's in many applications.



Features

- 1/2 and 3/8 inch diameters
- Dual wiper design
- Extruded wiper block guides
- MystR plastic element
- Internal spring loaded ball joint for MLT
- Anodized extruded aluminum housing
- Stainless steel shaft
- Precious metal contact

Benefits

- Fits into tight spaces, clamps easily to cylinders
- Improves shock and vibration performance
- Smooth quiet motion; extends operating life
- Tested up to 1 billion operations
- Less error from shaft misalignment
- Tolerates clamping loads
- Full performance in hostile environments
- Low noise level over entire life

Applications

- Injection molding machines
- Medical rehabilitation equipment
- Hospital beds
- Linear actuators
- Animated characters
- Automobile panel contour measurements
- Woodworking guides
- Fluid flow meters
- Seismology

Technical Specifications

Model	Unit	LT	MLT
MECHANICAL			
Total Mechanical Travel	in. (min) mm (min)	1.05 to 10.05 26.7 to 255.3	.55 to 6.05 13.9 to 153.7
Starting Force	oz. (max)	1.0	
Total Weight	oz. (g)	see chart	see chart
Life	operations	1 billion	

ELECTRICAL

Theoretical Electrical Travel (in 1" increments)	in. mm	1 to 10 25.4 to 254.0	1/2 to 6 12.7 to 152.4
Independent Linearity*	±%	1.0	
Total Resistance	/in. elect. travel	1000	1500
Resistance Tolerance	±%	20	
Operating Temperature	°C	-40 to +80	
Resolution		infinite	
Insulation Resistance	Meg	1000 @ 500 Vdc	
Power Rating	Watt/in. elect. travel	0.25	0.20
Recommended Wiper Current	µA	<1	

OPTIONS**

- Other Resistance Values
- Independent Linearity to ±.1% for Electrical Travels 1 inch*
- Water Resistant Seal***
- Three Pin Connector for MLT

Theoretical Electrical Travel		LT Total Weight		MLT Total Weight	
Inches	mm	oz.	g	oz.	g
0.50	12.7	NA	NA	0.4	11.34
1.00	25.4	0.7	19.85	0.5	14.17
2.00	50.8	0.9	25.51	0.7	19.85
3.00	76.2	1.1	31.18	0.8	22.68
4.00	101.6	1.5	42.52	1.0	28.35
5.00	127.0	1.6	45.36	1.1	29.77
6.00	152.4	1.7	48.19	1.1	31.18
7.00	177.8	1.8	51.03	1.3	36.85
8.00	203.2	2.0	56.70	NA	NA
9.00	228.6	2.2	62.37	NA	NA
10.00	254.4	2.4	68.04	NA	NA

* 5 to 95% of Theoretical Electrical Travel

** Minimum quantities may be required.

*** LT only, 12 oz. (340 g) max. starting force

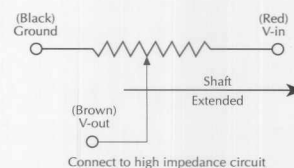
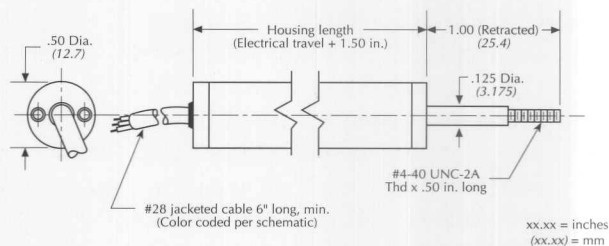
NOTE: Do not test using an Ohmmeter on a Rx1 scale or other current devices. Excessive wiper current may cause output errors and will cause damage. Zero side load is recommended to achieve maximum life.

WARRANTY

All Data Instruments products are warranted against defective materials and workmanship for a period of one year from the date of delivery to the original purchaser. Any product that is found within the one-year period not to meet these standards will be replaced or repaired at the discretion of Data Instruments. No other warranty is expressed or implied. Data Instruments accepts no responsibility for misuse, misapplication or unauthorized modification of its products. Data Instruments accepts no liability for damages, including any anticipated or lost profits, incidental damages, consequential damages, costs, time charges or other losses incurred in connection with the purchase installation, repair or operation of our products, or any part thereof.

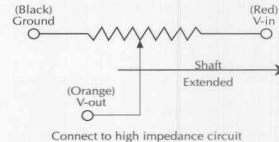
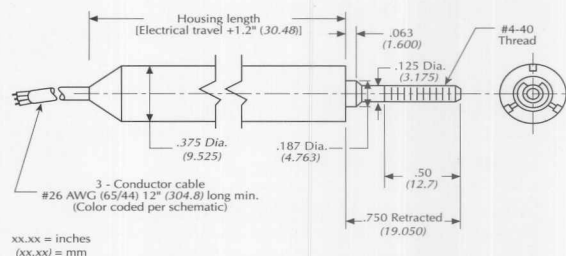
Dimensions

Model LT

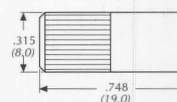
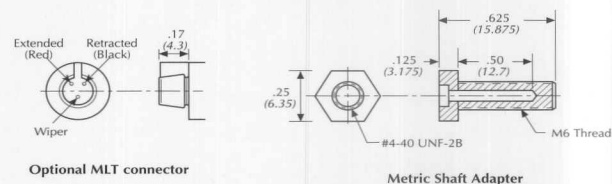


SCHEMATIC DIAGRAM

Model MLT



SCHEMATIC DIAGRAM



MLT Mating Connector

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